Practitioner's Docket No. 508-078.002 ***PATENT***

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: D. VERNON-DIER Group No.: 3611
Application No.: 10 / 820,626
Filed: April 8, 2004 Examiner: Not Yet Assigned
For: Sign

Assistant Commissioner for Patents
Washington, D.C. 20231

TRANSMITTAL OF CERTIFIED COPY

Attached please find the certified copy of the foreign application from which priority is claimed for this case:

Country: United Kingdom

Application Number: 0308034.5

Filing Date: April 8, 2003

WARNING: *"When a document that is required by statute to be certified must be filed, a copy, including a photocopy or facsimile transmission of the certification is not acceptable." 37 C.F.R. § 1.4(f) (emphasis added).*

SIGNATURE OF PRACTITIONER

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NOTE: The claim to priority need be in no special form and may be made by the attorney or agent, if the foreign application is referred to in the oath or declaration, as required by § 1.63.

CERTIFICATE OF MAILING (37 C.F.R. § 1.8a)

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Date: November 16, 2004 Lissette Ramos

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Dated 14 April 2004

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08APR03 E798488-1 C45241
P01/7700-0.00-0308034.8

Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

The Patent Office

Cardiff Road
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NP10 8QQ

1. Your reference
ROTATING ILLUMINATED DISPLAY

2. Patent application number
(The Patent Office will fill in this part)
0308034.8
F 8 APR 2003

3. Full name, address and postcode of the or of each applicant *(underline all surnames)*
DAVID RICHARD VERNON DIER
1 MIDDRIDGE LANE
SHILDON. CO. DURHAM. DL4 2BL

Patents ADP number *(if you know it)*
5852279002

If the applicant is a corporate body, give the country/state of its incorporation
EN

4. Title of the invention
ROTATING ILLUMINATED DISPLAY

5. Name of your agent *(if you have one)*

"Address for service" in the United Kingdom to which all correspondence should be sent *(including the postcode)*

Patents ADP number *(if you know it)*

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and *(if you know it)* the or each application number

Country	Priority application number *(if you know it)*	Date of filing *(day / month / year)*

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application	Date of filing *(day / month / year)*

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? *(Answer 'Yes' if:*
a) any applicant named in part 3 is not an inventor, or
b) there is an inventor who is not named as an applicant, or
c) any named applicant is a corporate body.
See note (d))

ROTATING ILLUMINATED DISPLAY

Prior art
Spinning signs are an existing format wherein the message is usually printed upon a flat plate. Said flat plate acts as a form of sail that is driven by the wind.The plate rotates about a central axis and the sign is observed at varying degrees of motion depending upon the available wind.

The invention seeks to incorporate the prior art and combine it with lighting.This will make the lighting kinetic enabling optical illusions to be created by design.

The invention consists of an adjustable frame (1) that may be mounted about a lamp post (18) building façade, and or other suitable surface.In another embodiment the frame may be floor standing. The frame accommodates one or more bearing (14) assemblies (Fig 3) . The bearings (14) house primary dive shafts (13) . The drive shafts (13) have the display shaft (21) located around and affixed to themselves.The display shaft (21) is centered through the frame that houses the display (24). The frame that houses the display (24) surface area acts as a sail (25) . When the wind strikes this area the display rotates.

In order to enable the flow of electricity to the rotating display the incorporation of a slip ring device (fig 1, fig 2) is required.
A powersupply is located on or about the frame (19). Said power supply outputs dc current to the display via the slip ring assembly.The outer section of the slip ring assembly remains static whilst the inner section of the assembly is affixed to the drive shaft (13). The electricity is transferred by bushes onto the sliprings. The dc is then fed through the drive shaft (13) to the display.The display may incorporate a control device so as to further animate the lighting there on (22).
Figures 4 / 5 show some designs that may be utilised.The kinetic action will alter the appearance of the observed light. Fig 5a The candle will appear to be located inside a sphere of light when the display reaches a preffered speed of rotation. Fig 5 b,5c,5d,5e will all become three dimensional in appearance. The faster the display rotates the stronger the visual illusion observed.
In another embodiment of the invention the drive shaft (13) may be affixed to a dymano and or generator (20,20a). This device can create enough electricity so as to illuminate the display without the need to use the power supply (19) making the display eco friendly. Changeover circuitry can be incorporated enabling the dynamo and or generator

(20,20a) to cut in only when they are creating enough electricity to power the display.
Alternatively the generator, dynamo and or solar panel (20,20a,26) may be used as charging devices for batteries. The batteries provide electricity to run the display via the slip ring assembly. When the batteries run down to a pre determined level the changeover circuitry reverts to the power supply (19) to power the supply whilst the batteries get re charged.
In the event that the invention is utilised in conditions where there is no prevailing wind the display may be driven by motor (20b,20c)
There is also the facility to incorporate a so called dark switch in the electronics. The photodiode (27) will allow the flow of electricity to the invention when the ambient light around the display drops to pre determined level. The light sources utilised in the display(23) may be high intensity led.

Figure 1
1 Frame
2 Sealing gasket
3 Grub screw
4 Main seal
5 Bush
6 Brush holder
7 Brush terminal
8 Cable clamp
9 Cover tube
10 IP66 cable gland
11 Cable exit into shaft
12 Slip ring
13 Tubular shaft
14 Bearing assembly

Figure 2
15 Main fixings to affix slip ring assembly to frame
16 Slip ring terminals

Figure 3
17Fixing points to secure display shaft to drive shaft
18 Slots for strap fixings for lamp post installation
19 Power supply dc / battery supply/ change over circuitry
20 Dynamo
20a Generator
20b Dynamo/ Drive motor
20c Generator/Drive motor

Figure 4
21 Display shaft
22 Controller electronic
23 Light sources led
24 Frame to house display
25 Surface of sail/ wind turbine

Figure 6
26 Solar panel to charge batteries
27 Photo diode "dark switch"

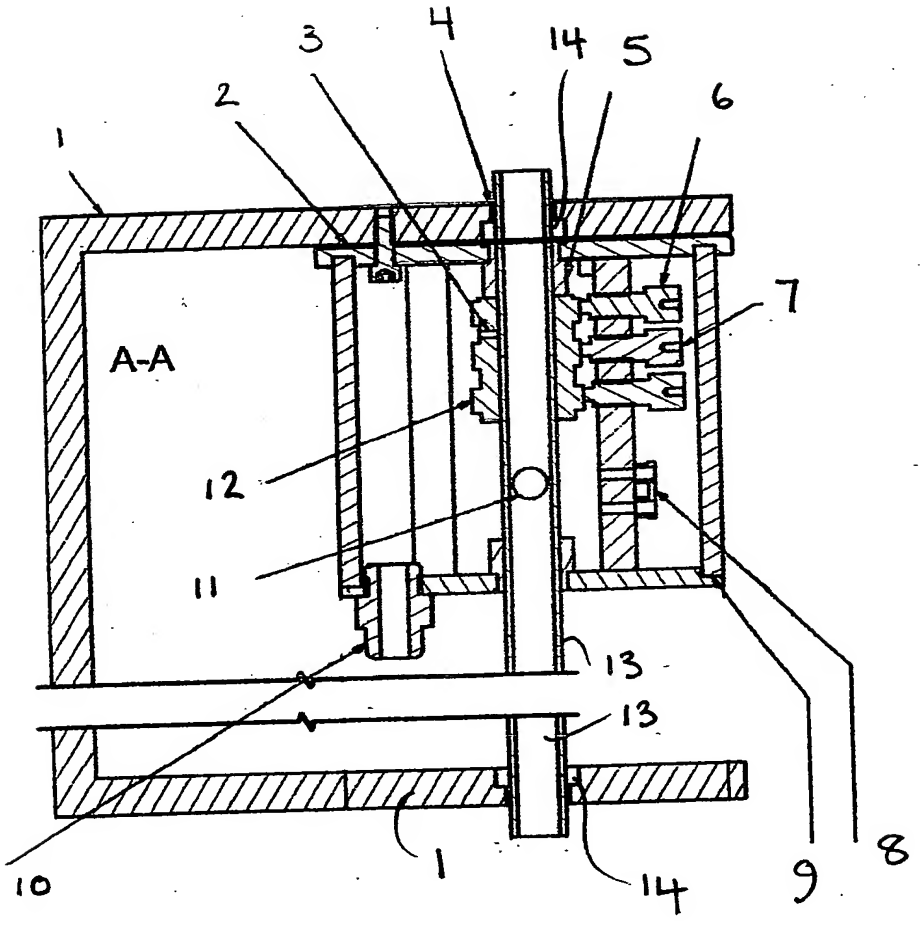


FIGURE 1

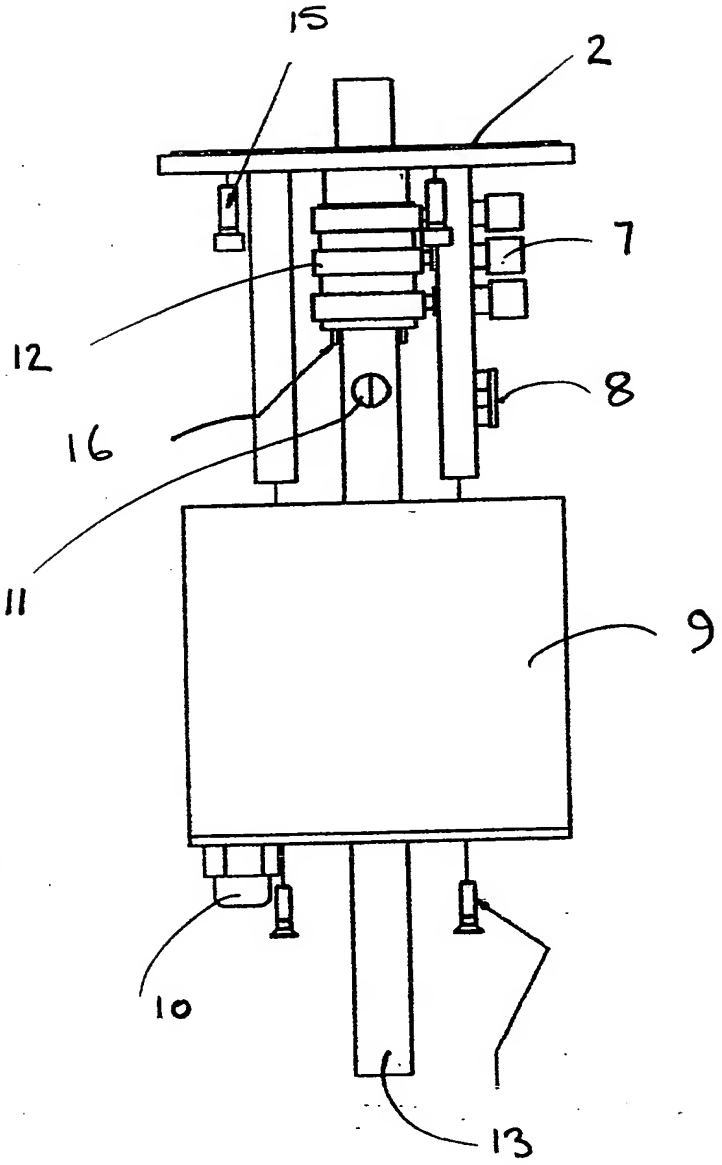
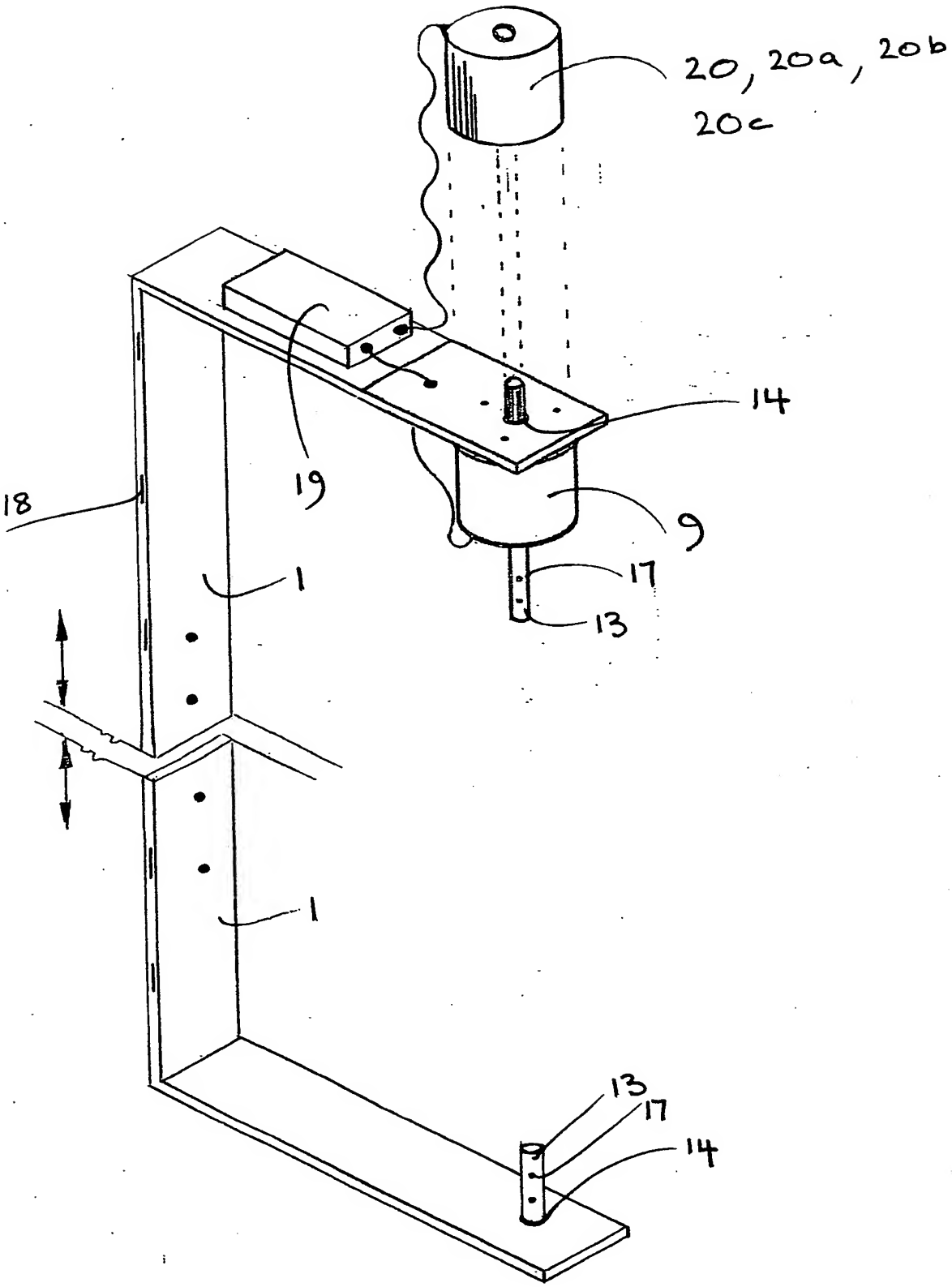


FIGURE 2

FIGURE 3



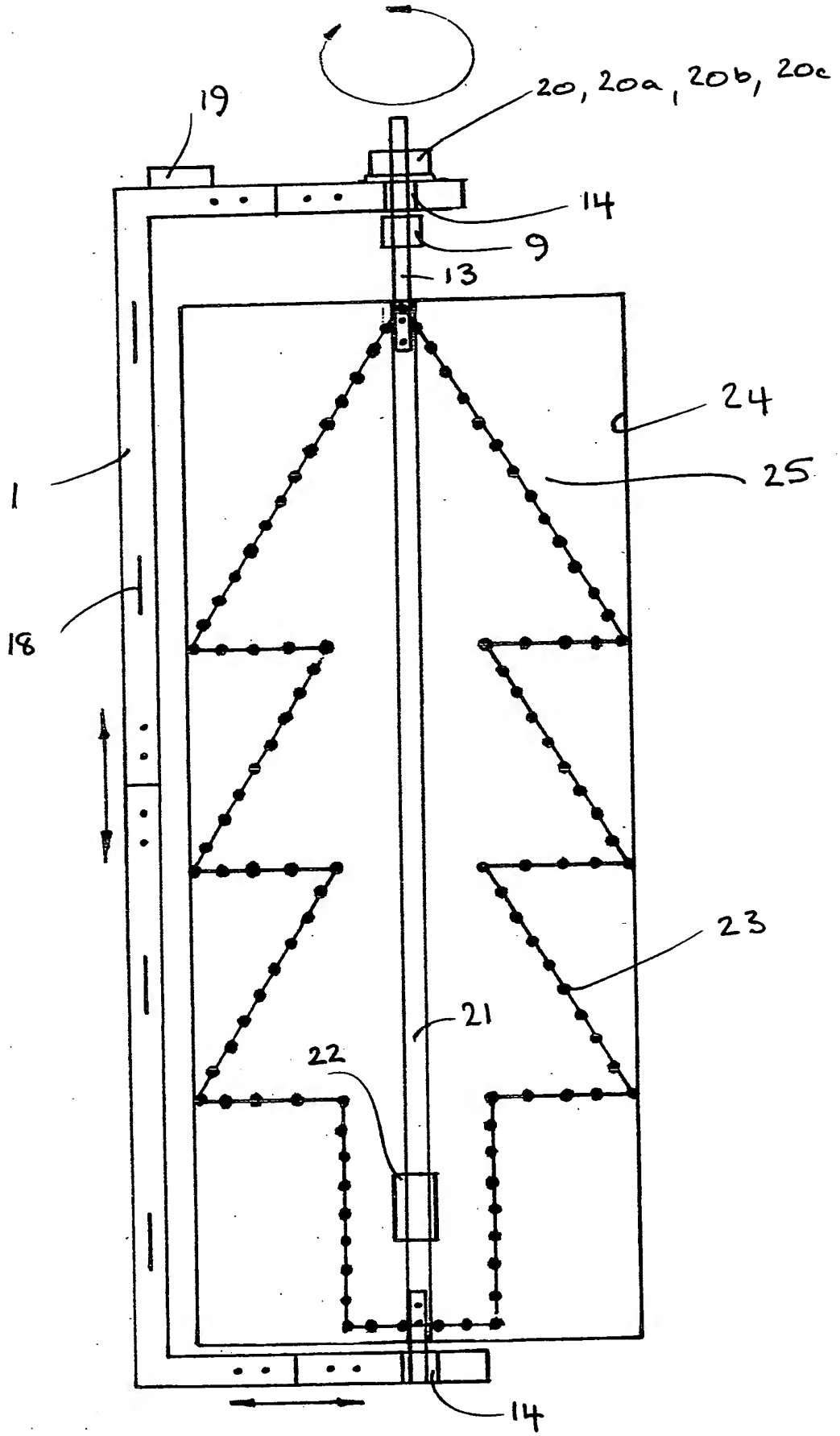


FIGURE 4

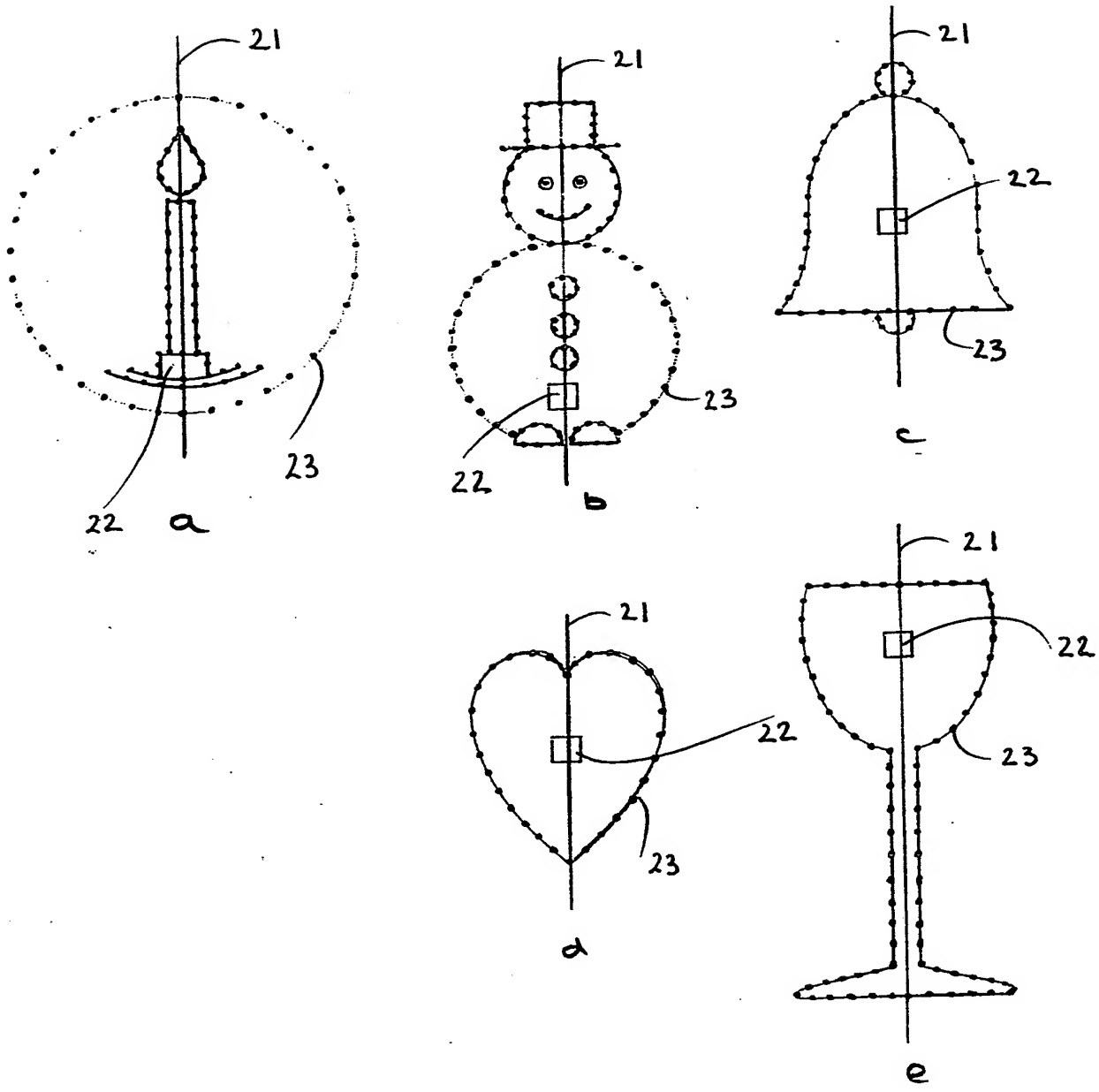


FIGURE 5

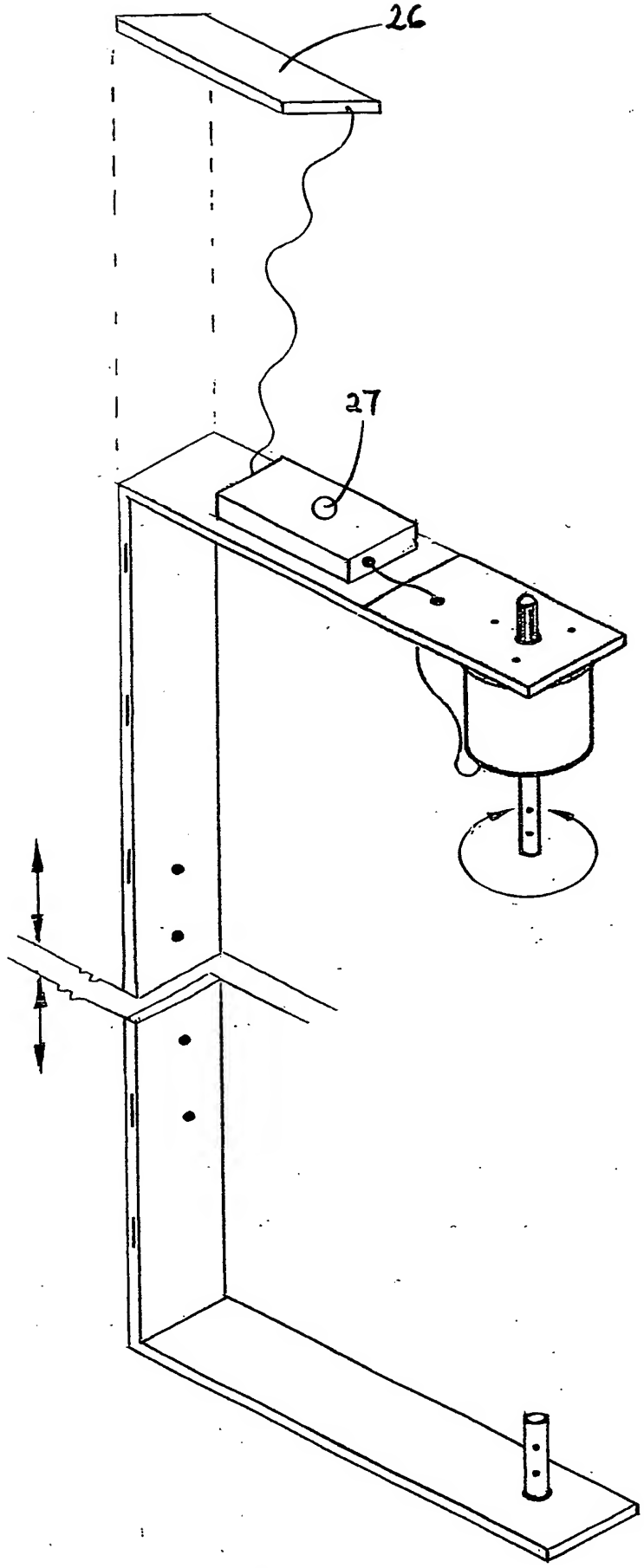


FIGURE 6